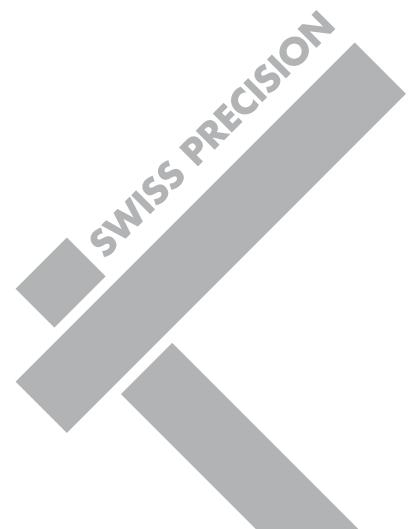


# **BOPP**

## **High Tech Mesh for Fuel Cell Technology**

**bopp.com**



# BOPP High Tech Mesh for Fuel Cell Technology

## BOPP – LEADING IN HIGH TECH MESH

BOPP is one of the world's leading producers of precision woven wire meshes. The high quality wire cloths are used worldwide as square weave meshes for sieving and sizing,

as stainless steel wire cloth for screen printing, as filter media and laminates as well as support meshes for a wide range of applications. A couple of years ago BOPP started to develop

special meshes for applications in the range of electrical engineering focussed on fuel cell and battery technology based on different alloys and mesh designs.

### ■ SWISS COMPANY WITH LONG ESTABLISHED TRADITION FOR EXCELLENCE



<b>Founded:</b>	1881
<b>Subsidiaries:</b>	Germany, England, Italy, Sweden, USA, China, Korea
<b>Employees:</b>	200 in Switzerland 400 worldwide
<b>Production:</b>	70% of total Output in CH 85% exported
<b>Weaving Plant:</b>	140 Machines
<b>Metal Volume:</b>	170 Tons p.a.
<b>Wire Threat:</b>	17'500'000 km p.a.
<b>Mesh manufactured:</b>	340 km p.a.
<b>Finest Wire woven:</b>	0.015 mm Ø

## BOPP – COMPETENCE IN FABRICATION



### ■ MECHANICAL UNIT OPERATION

CAD controlled fine cutting, mechanical cutting, laser cutting, stamping, drawing and forming, binding, synthetic coating, stretching, spot, roll seam and plasma welding, soldering, calendaring

### ■ PROTOTYPES, ONE-OFFS

Development of new solutions working closely with customers, "One-offs" produced to meet individual requirements

### ■ THERMAL AND CHEMICAL FINISHING

Sintering, tension free bonding, surface treatments, functional coatings

### ■ REPLACEMENT PARTS

Reconditioning of wearing parts, exchange of damaged meshes, reverse engineering, modifications to customer specifications, call-off storage and delivery

### ■ OEM PARTS

Manufacture of materials and semi-finished goods such as rings, flanges, reinforcements, supports, reconditioning of used components

### ■ EQUIPMENT AND KNOWLEDGE BUILDING

Development and production of equipment for demanding applications

### ■ VOLUME PRODUCTION

Fully or semi-automated volume production for maximum economy



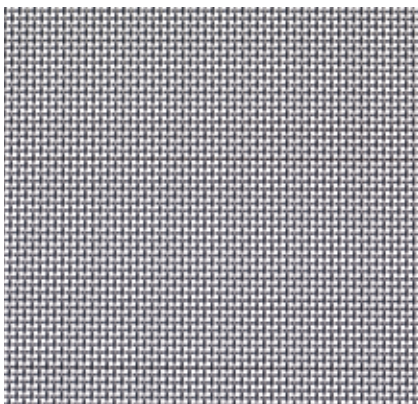
## BOPP – COMPETENCE IN MESH FOR FUEL CELL TECHNOLOGY



Material	Description	AISI/UNS	Wire diameter
1.4301	X5 Cr Ni 18 10 (V2A)	304	>0.016mm
1.4306	X5 Cr Ni 18 11	304L	>0.016mm
1.4401	X5 Cr Ni Mo 17 12 2 (V4A)	316	>0.015mm
1.4404	X2 Cr Ni Mo 17 12 2	316L	>0.015mm
1.4841	X10 Cr Ni Si 25 20	314	>0.030mm
1.4539	X1 Cr Ni Mo Cu 25 20 5	904L	>0.025mm
1.4760	X1 Cr Ti La 22 (Crofer)	S 44535	>0.120mm
2.4602	Ni Cr 21 Mo 14 W (Hastelloy C-22)	N 06022	>0.040mm
2.4856	Ni Cr 22 Mo 9 Nb	N 06625	>0.035mm
2.4060	Ni 99.6	N 02200	>0.036mm
2.4066	Ni 99.2	N 02200	>0.036mm
2.0060	Copper	E-Cu 57	>0.030mm
3.3555	Aluminium	Al Mg 5	>0.036mm

Other alloys on request

## BOPP – COMPETENCE IN MESH FOR FUEL CELL TECHNOLOGY



### COMMON MESHES:

- Square weave wire cloth
- Rectangular weave wire cloth
- Twilled Dutch weave
- Twilled Dutch single weave
- Sintered multilayer laminates

### COMMON TREATMENTS:

- Heat treatment
- Calendering
- Coating

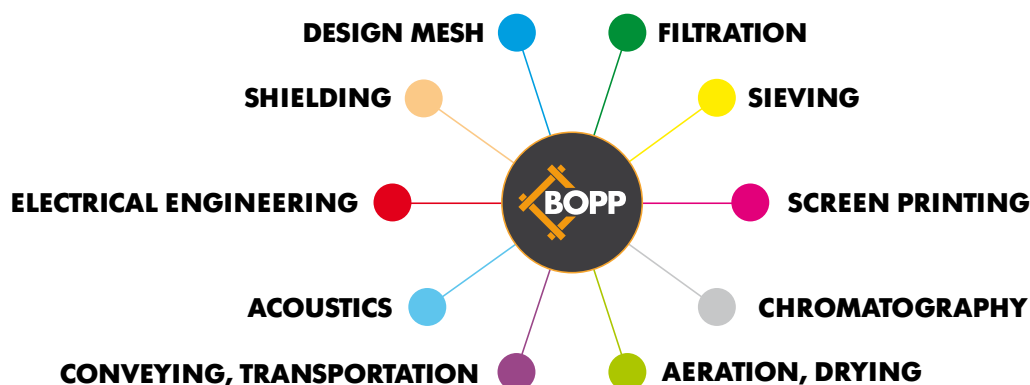
### COMMON MANUFACTURING:

- Slitting
- Die cutting
- Customized quality control

### COMMON COMMERCIAL AGREEMENTS:

- Development contracts
- Non-disclosure agreements
- Call off contracts

## BOPP – COMPETENCE IN APPLICATIONS



## The BOPP Group

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